

1449 VOL-33

Library of the Museum

OF

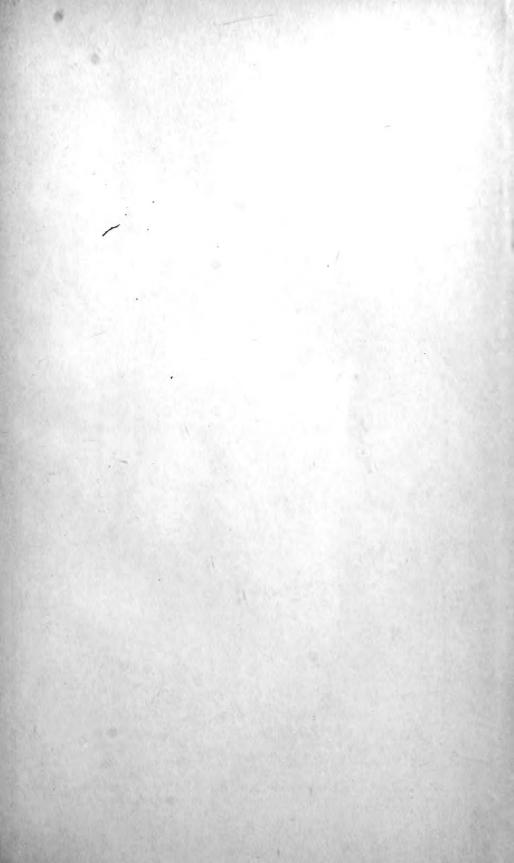
COMPARATIVE ZOÖLOGY,

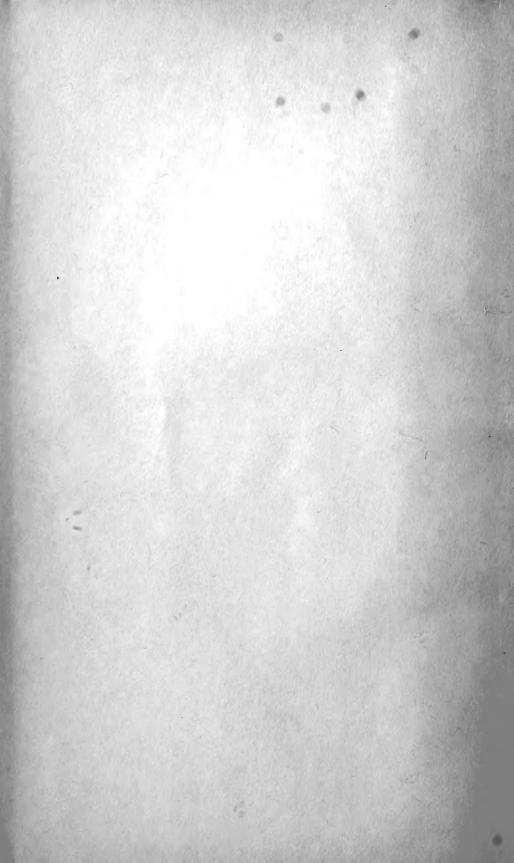
AT HARVARD COLLEGE, CAMBRIDGE, MASS.

Founded by private subscription, in 1861.

Deposited by ALEX. AGASSIZ.

Jan. 23 - July 30, 1892





New Series, No. CXXIX (Vol. XXXIII, Part 1).

Price 10s.

DECEMBER, 1891.

THE

1-21

QUARTERLY JOURNAL

MICROSCOPICAL SCIENCE.

EDITED BY

E. RAY LANKESTER, M.A., LL.D., F.R.S., Honorary Fellow of Exeter College, Oxford.

WITH THE CO-OPERATION OF

E. KLEIN, M.D., F.R.S.,

Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital, London;

ADAM SEDGWICK, M.A., F.R.S.,

Fellow and Assistant-Lecturer of Trinity College, Cambridge;

A. MILNES MARSHALL, M.A., D.Sc., M.D., F.R.S., Late Fellow of St. John's College, Cambridge; Professor in the Victoria University; Beyer Professor of Zoology in the Owens College, Manchester.

WITH LITHOGRAPHIC PLATES AND ENGRAVINGS ON WOOD.



LONDON:

J. & A. CHURCHILL, 11, NEW BURLINGTON STREET.

MDCCCXCI.

CONTENTS OF No. CXXIX.—New Series.

MEMOIRS:	PAGE
Some Problems of Reproduction: a Comparative Study of Gametogeny and Protoplasmic Senescence and Rejuvenescence. By MARCUS M. HARTOG, M.A., D.Sc., F.L.S., Professor of Natural History in the Queen's College, Cork.	1
On Wandering Cells in Echinoderms, &c., more especially with regard to Excretory Functions. By HERBERT E. DURHAM, M.A., King's College, Cambridge, and Guy's Hospital, London. (With Plate I)	81
On the Nature of the Excretory Processes in Marine Polyzoa. By Sidney F. Harmer, M.A., B.Sc., Fellow and Assistant Tutor of King's College, Cambridge. (With Plates II and III) .	123
Spermatogenesis in Myxine glutinosa. By J. T. Cunningham, M.A., Naturalist on the Staff of the Laboratory of the Marine Biological Association, Plymouth. (With Plate IV).	169
Notes on some Aquatic Oligochæta. By W. BLAXLAND BENHAM, D.Sc. Lond., Aldrichian Demonstrator of Comparative Anatomy, Oxford. (With Plates V, VI, and VII)	187
On the Differentiation of Leprosy and Tubercle Bacilli. By CHARLES SLATER, M.B.Cantab.	219
On a Specimen of the True Teeth of Ornithorhynchus. By Professor Charles Stewart, P.L.S. (With Plate VIII)	229

2000.

New Series, No. CXXX (Vol. XXXIII, Part 2).

MAR 10 1199

Price 10s.

7527.

JANUARY, 1892.

THE

QUARTERLY JOURNAL

OF

MICROSCOPICAL SCIENCE.

BDITED BY

E. RAY LANKESTER, M.A., LL.D., F.R.S.,

Linacre Professor of Human and Comparative Anatomy, Fellow of Merton College, and Honorary Fellow of Exeter College, Oxford.

WITH THE CO-OPERATION OF

E. KLEIN, M.D., F.R.S.,

Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital, London;

ADAM SEDGWICK, M.A., F.R.S.,

Fellow and Assistant-Lecturer of Trinity College, Cambridge;

AND

A. MILNES MARSHALL, M.A., D.Sc., M.D., F.R.S.,

Late Fellow of St. John's College, Cambridge; Professor in the Victoria University; Beyer Professor of Zoology in the Owens College, Manchester.

WITH LITHOGRAPHIC PLATES AND ENGRAVINGS ON WOOD.



LONDON:

J. & A. CHURCHILL, 11, NEW BURLINGTON STREET.

MDCCCXCII.

CONTENTS OF No. CXXX.-New Series.

MEMOIRS:	17
On Onchnesoma Steenstrupii. By ARTHUR E. SHIPLEY, M.A., F.L.S., Fellow and Lecturer of Christ's College, Cambridge, and Demonstrator of Comparative Anatomy in the University. (With Plate IX)	233
Note on a Sieve-like Membrane across the Oscula of a Species of Leucosolenia, with some Observations on the Histology of the Sponge. By Edward A. Minchin, Assistant to the Linacre Professor of Human and Comparative Anatomy in the University of Oxford. (With Plates X and XI).	251
The Development of the Oviduct in the Frog. By ERNEST W. MACBRIDE, B.A.Cantab., B.Sc.Lond., Scholar of St. John's College, and Scholar of the University of London. (With Plates XII and XIII)	273
On the Nauplius Eye persisting in some Decapods. By MARGARET ROBINSON, University College, London. (With Plate XIV)	283
Notes on Two Acanthodriloid Earthworms from New Zealand. By. W. Blaxland Benham, D.Sc.Lond., Aldrichian Demonstrator of Anatomy in the University of Oxford. (With Plates XV and XVI)	289
On a New Genus of Synascidians from Japan. By ASAJIRO OKA, of the Imperial University of Tokio, and ARTHUR WILLEY, B.Sc. Lond. (With Plates XVII and XVIII)	313

New Series, No. CXXXI (Vol. XXXIII, Part 3).

Price 10s.

7527

MARCH, 1892.

THE

QUARTERLY JOURNAL

OF

MICROSCOPICAL SCIENCE.

EDITED BY

E. RAY LANKESTER, M.A., LL.D., F.R.S.,

Linacre Professor of Human and Comparative Anatomy, Fellow of Merton College, and Honorary Fellow of Exeter College, Oxford.

WITH THE CO-OPERATION OF

E. KLEIN, M.D., F.R.S.,

Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital, London;

ADAM SEDGWICK, M.A., F.R.S.,

Fellow and Assistant-Lecturer of Trinity College, Cambridge;

AND

A. MILNES MARSHALL, M.A., D.Sc., M.D., F.R.S.,

Late Fellow of St. John's College, Cambridge; Professor in the Victoria University; Beyer Professor of Zoology in the Owens College, Manchester.

WITH LITHOGRAPHIC PLATES AND ENGRAVINGS ON WOOD.



LONDON:

J. & A. CHURCHILL, 11, NEW BURLINGTON STREET.

MDCCCXCII.

CONTENTS OF No. CXXXI.—New Series.

4	MUINS:
	A New Branchiate Oligochæte (Branchiura Sowerbyi). By Frank E. Beddard, M.A., Prosector to the Zoological Society of London, Lecturer on Biology at Guy's Hospital. (With Plate XIX) 325
,	The Formation of the Germ-layers in Crangon vulgaris. By W. F. R. Weldon, M.A., F.R.S., Fellow of St. John's College, Cambridge; Jodrell Professor of Zoology in University College, London.
	(With Plates XX, XXI, and XXII) 343
	The Pigment Cells of the Retina. By J. S. Boden and F. C. Sprawson, Students of Medicine, King's College, London . 365
	Observations upon the Development of the Segmentation Cavity, the Archenteron, the Germinal Layers, and the Amnion in Mammals. By Arthur Robinson, M.D., Senior Demonstrator of Anatomy at the Owens College, Manchester. (With Plates XXIII, XXIV,
	XXV, XXVI, and XXVII)

New Series, No. CXXXII (Vol. XXXIII, Part 4).

Price 10s.

7527 July 36, 1892. JUNE, 1892.

THE

QUARTERLY JOURNAL

OF

MICROSCOPICAL SCIENCE.

EDITED BY

E. RAY LANKESTER, M.A., LL.D., F.R.S.,

Linacre Professor of Human and Comparative Anatomy, Fellow of Merton College, and Honorary Fellow of Exeter College, Oxford.

WITH THE CO-OPERATION OF

E. KLEIN, M.D., F.R.S.,

Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital, London;

ADAM SEDGWICK, M.A., F.R.S.,

Fellow and Lecturer of Trinity College, Cambridge;

AND

A. MILNES MARSHALL, M.A., D.Sc., M.D., F.R.S.,

Late Fellow of St. John's College, Cambridge; Professor in the Victoria University; Beyer Professor of Zoology in the Owens College, Manchester.

WITH LITHOGRAPHIC PLATES AND ENGRAVINGS ON WOOD.



LONDON:

J. & A. CHURCHILL, 11, NEW BURLINGTON STREET.

MDCCCXCII.

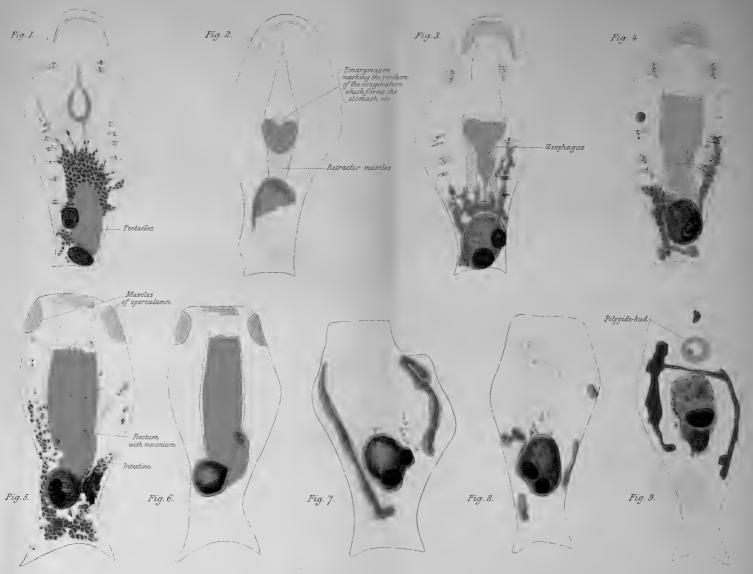
CONTENTS OF No. CXXXII.—New Series.

MEMOIRS:	AGE
Primitive Segmentation of the Vertebrate Brain. By BERTRAM H. WATERS, A.B., E. M. Fellow in Biology. (With Plate XXVIII).	
The Oscula and Anatomy of Leucosolenia clathrus, O.S. By E. A. Minchin, B.A., Assistant to the Linaere Professor of Human and Comparative Anatomy, Oxford. (With Plate XXIX).	477
Researches into the Embryology of the Oligochæta. No. I.—On Certain Points in the Development of Acanthodrilus multiporus. By Frank E. Beddard, M.A., F.R.S., Prosector of the Zoological Society of London. (With Plates XXX and XXXI).	497
On the Innervation of the Cerata of some Nudibranchiata. By W. A. HERDMAN, D.Sc., F.R.S., Professor of Natural History; and J. A. Clubb, Assistant in the Zoological Laboratory, University College, Liverpool. (With Plates XXXII, XXXIII, and XXXIV).	541
Notes on Elasmobranch Development. By Adam Sedgwick, M.A., F.R.S., Fellow and Lecturer of Trinity College, Cambridge. (With Plate XXXV)	559
On the Paired Nephridia of Prosobranchs, the Homologies of the only remaining Nephridium of most Prosobranchs, and the Relations of the Nephridia to the Gonad and Genital Duct. By Dr. R. v. Erlanger. (With Plates XXXVI and XXXVII)	587

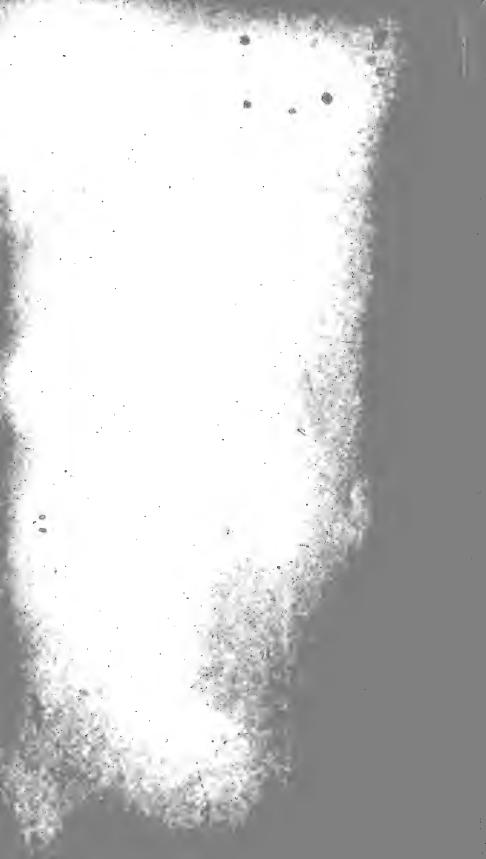
TITLE, CONTENTS, AND INDEX.

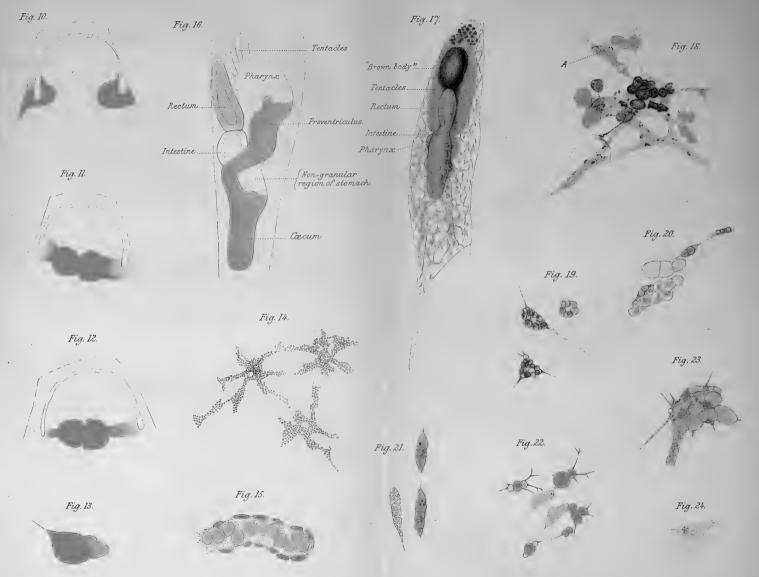






S F. Harmer del



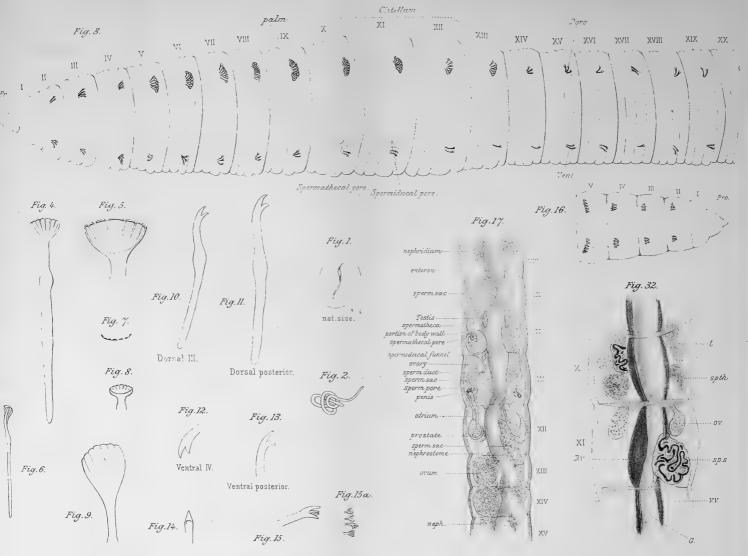




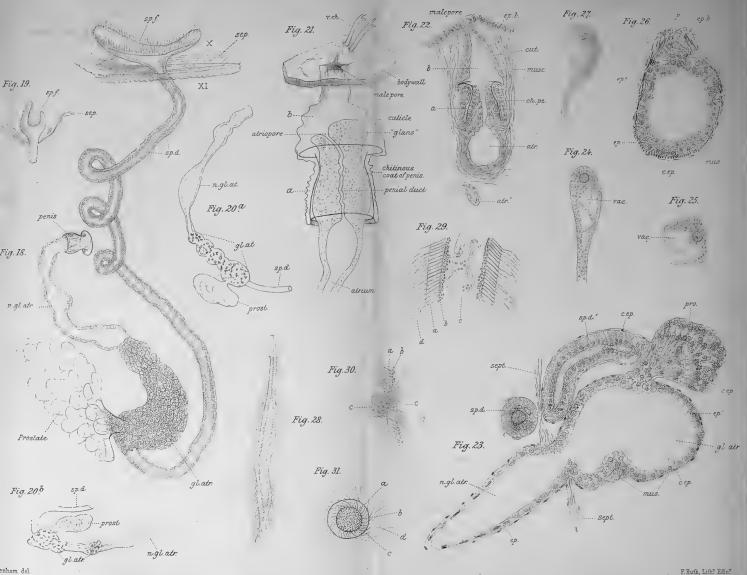


J.T Cunningham del.

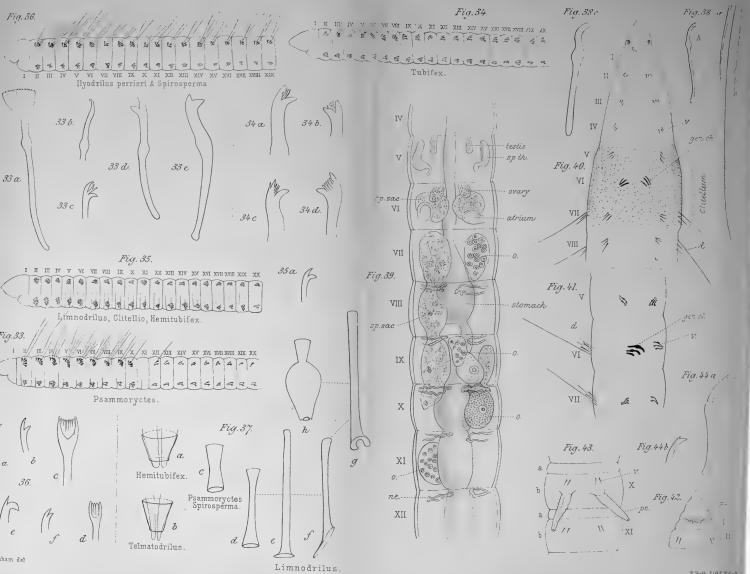




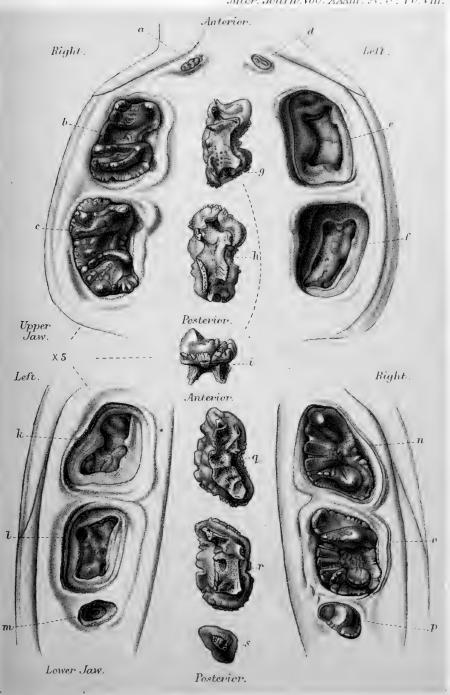








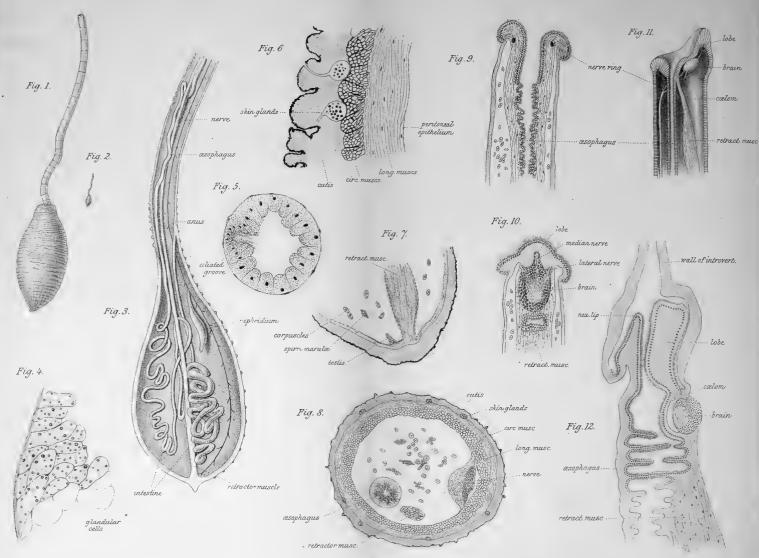


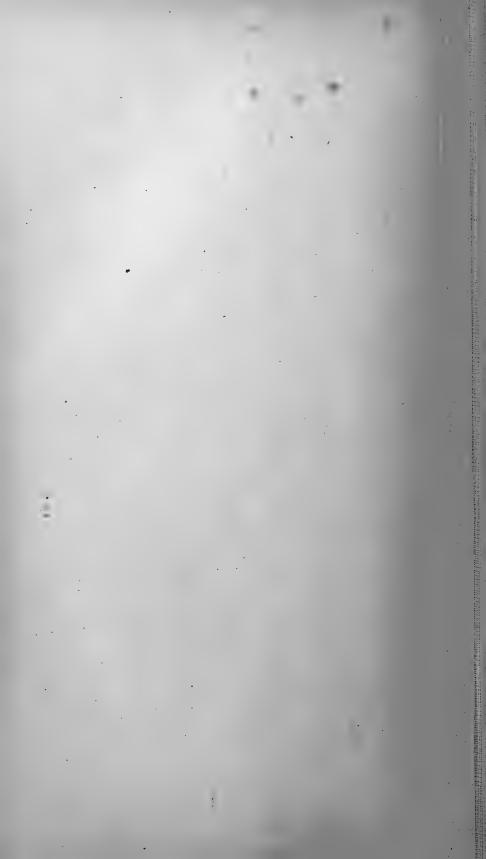


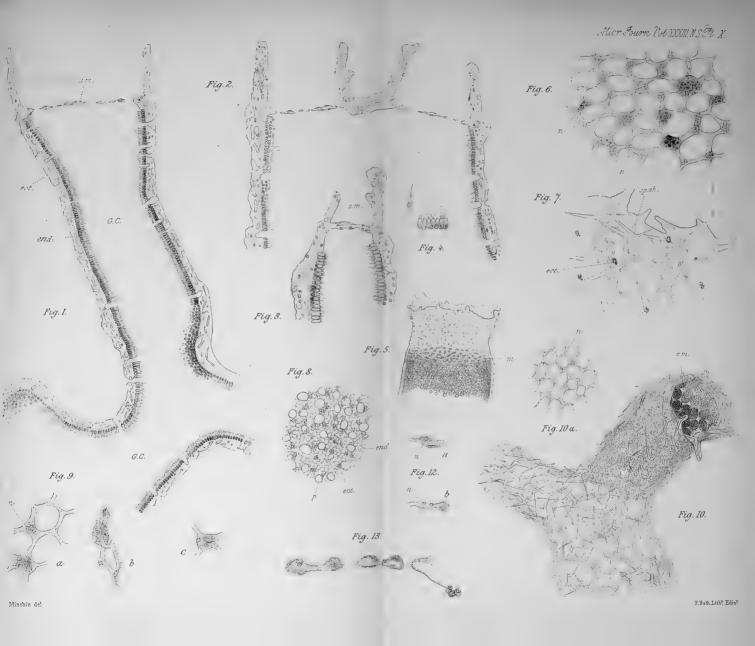
Hollick del.

Mintern Bros. lith.

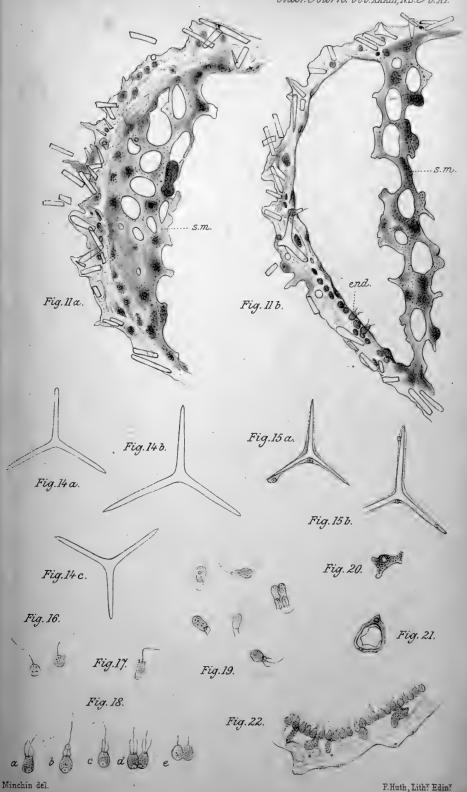


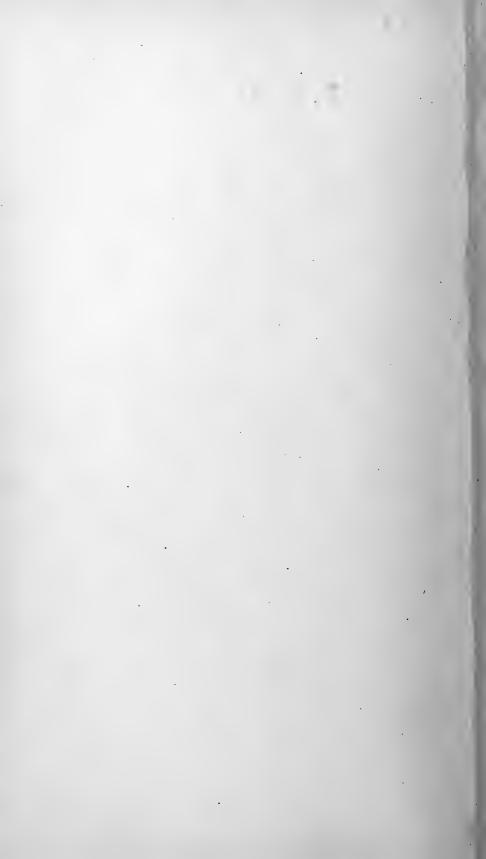




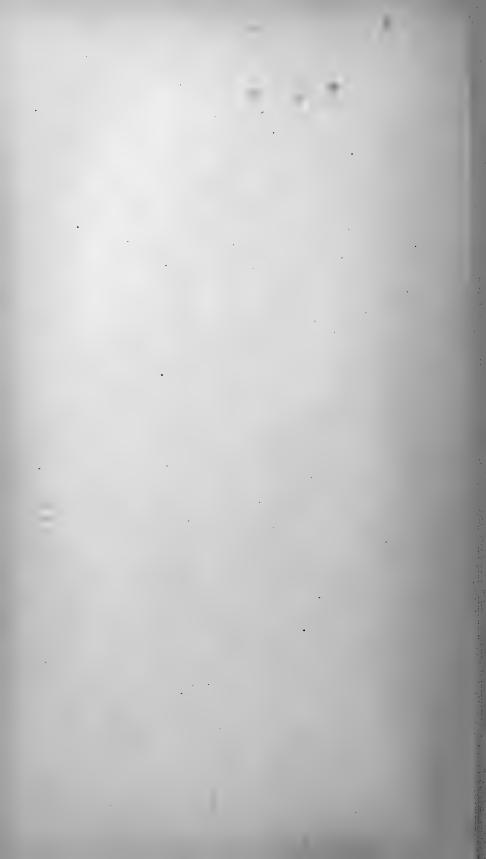


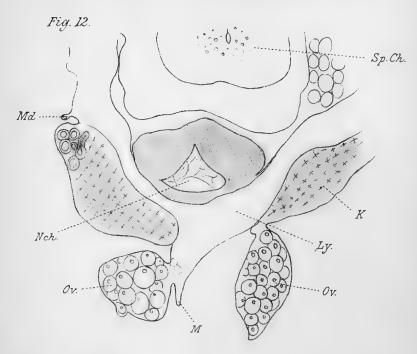


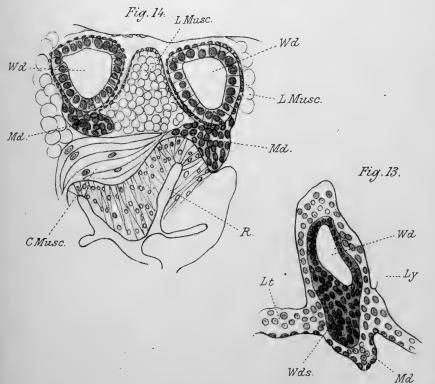




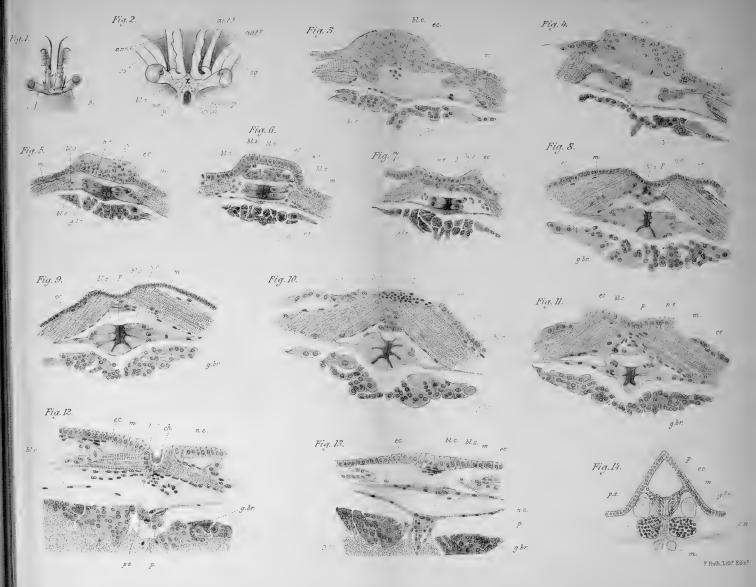




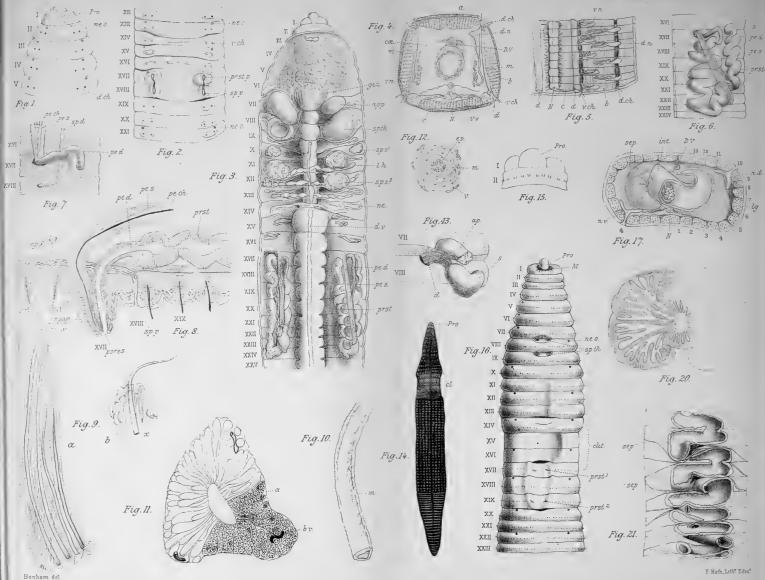


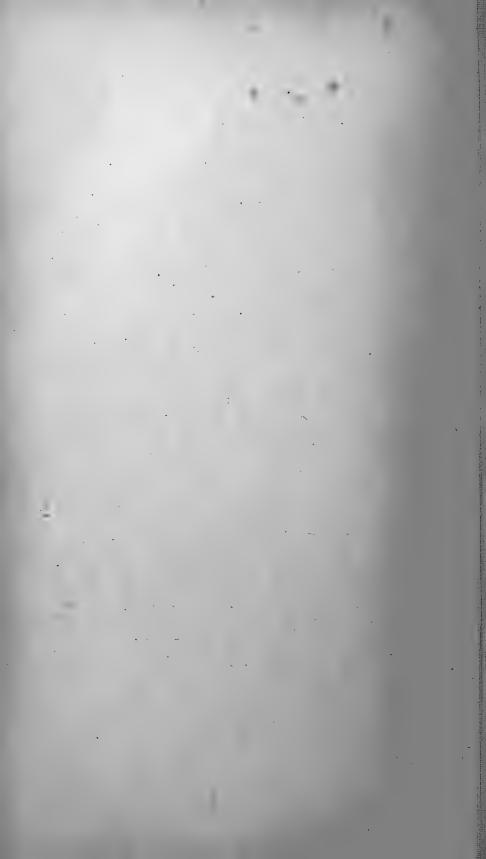


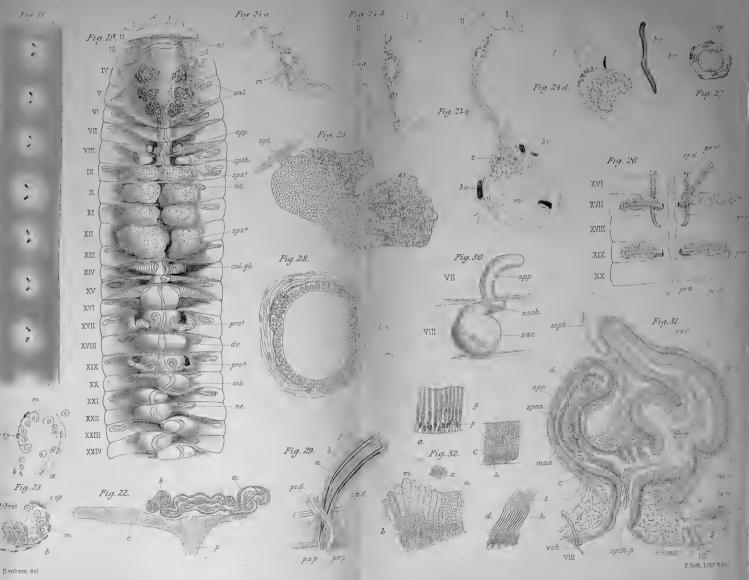


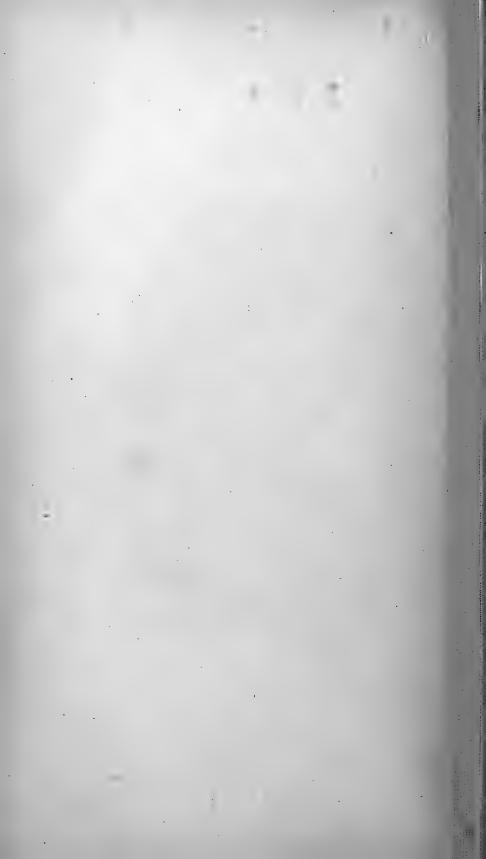






















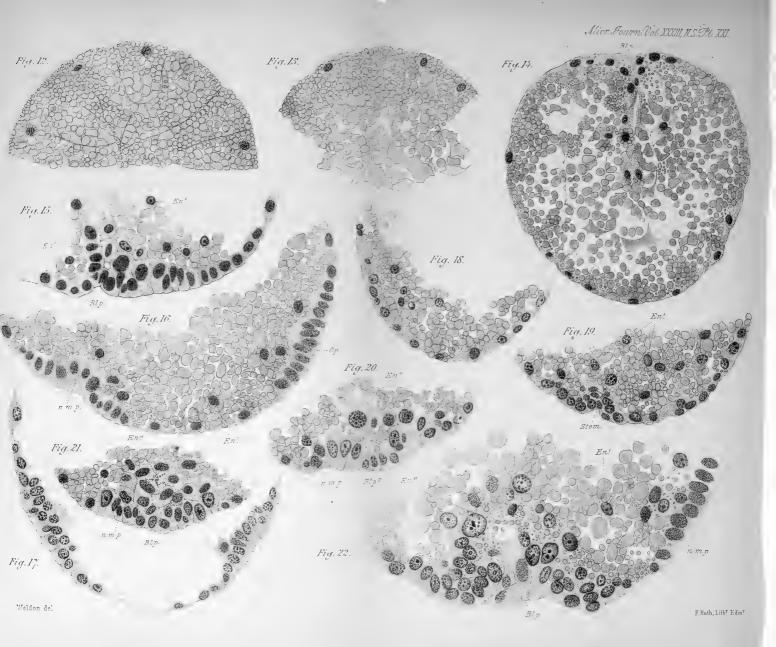
Md

1 . 498

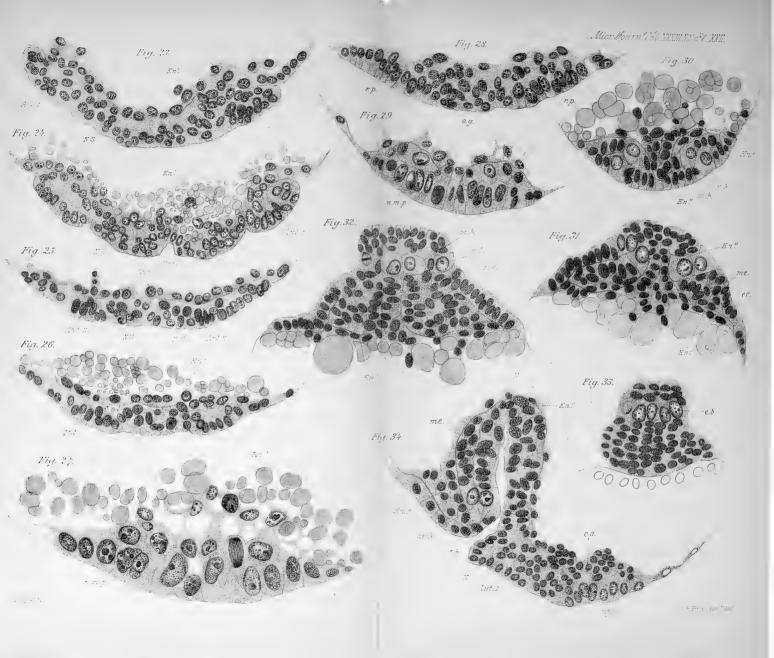
Th.Abd.

 $\mathcal{B}_{i,r}^{n}$

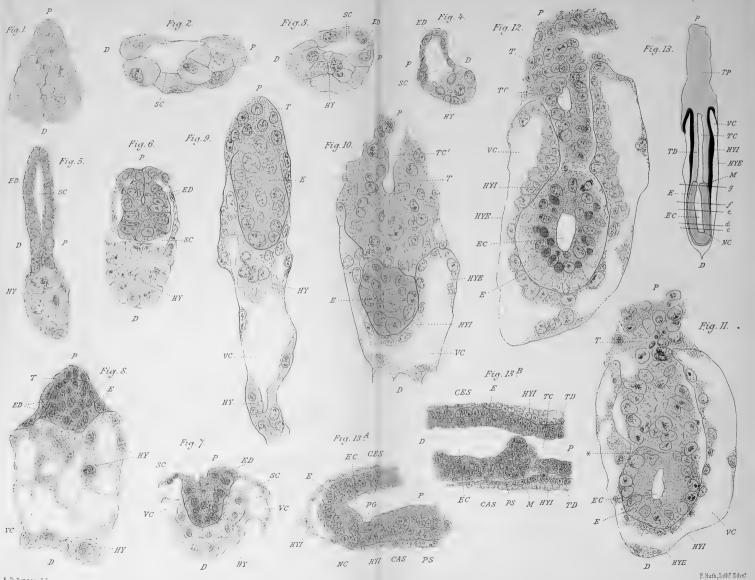




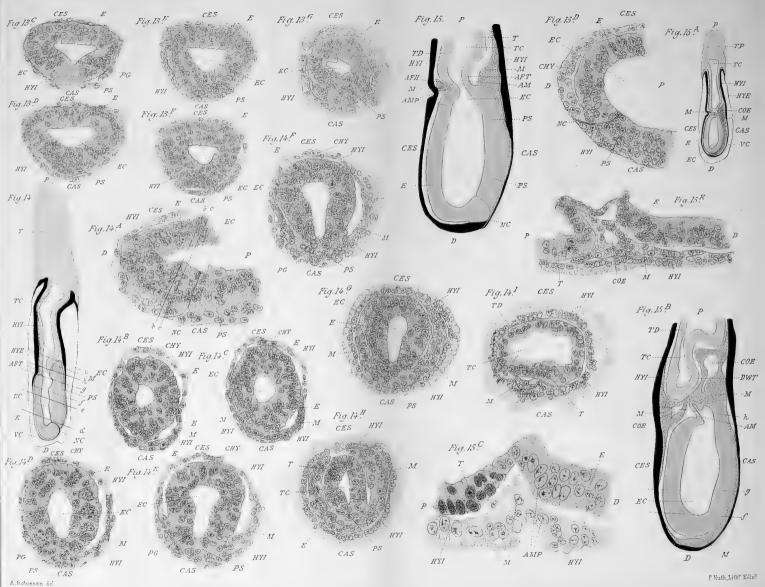














CAS

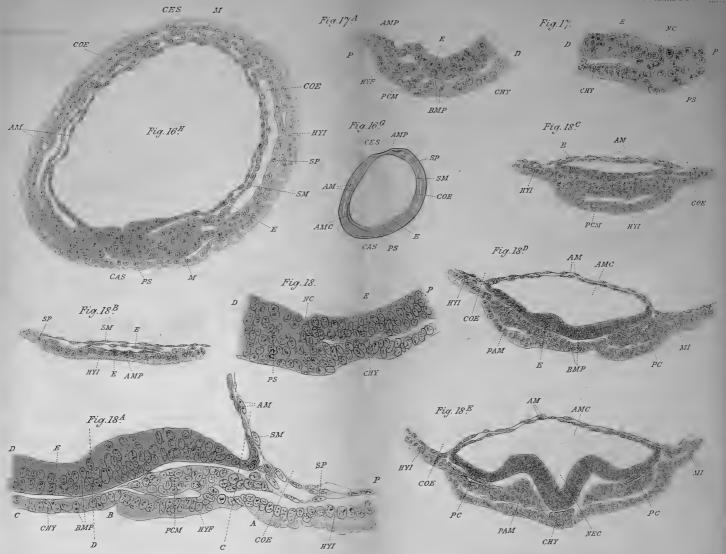
A.Robinson del

M

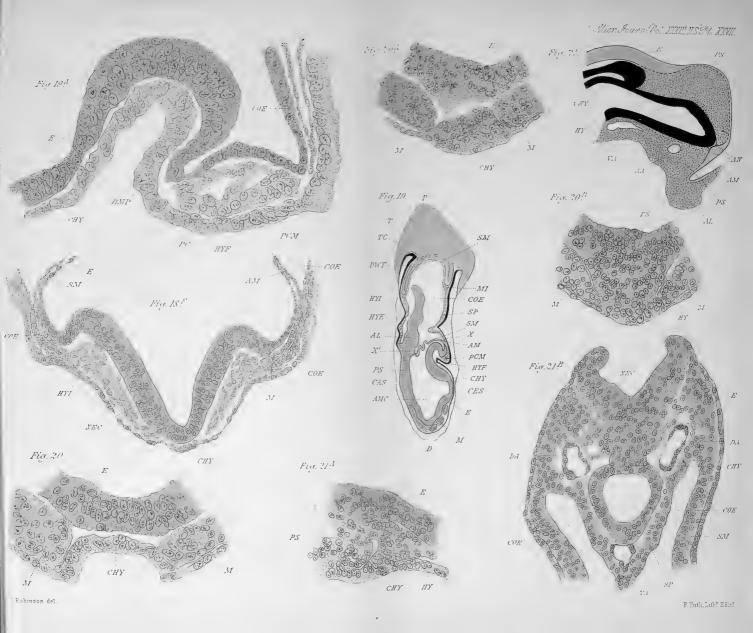
F. Huth, Lith? Edir

CAS

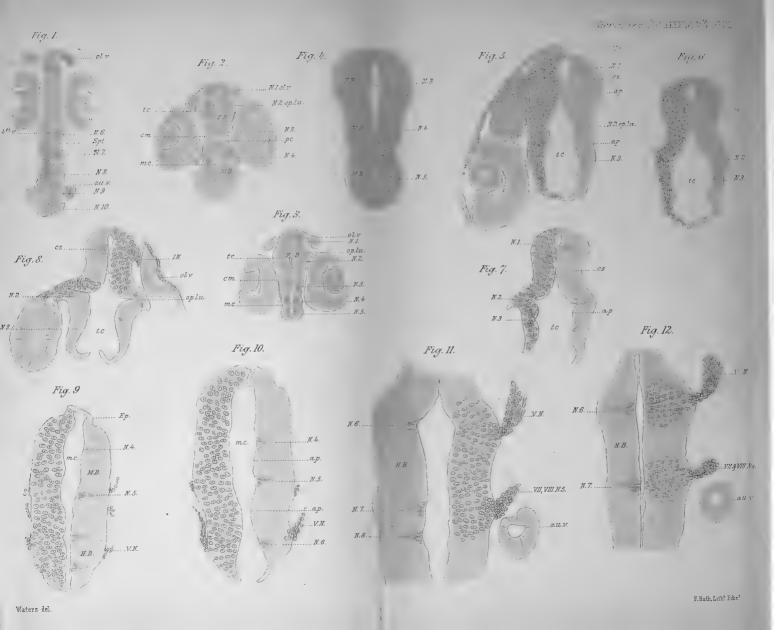




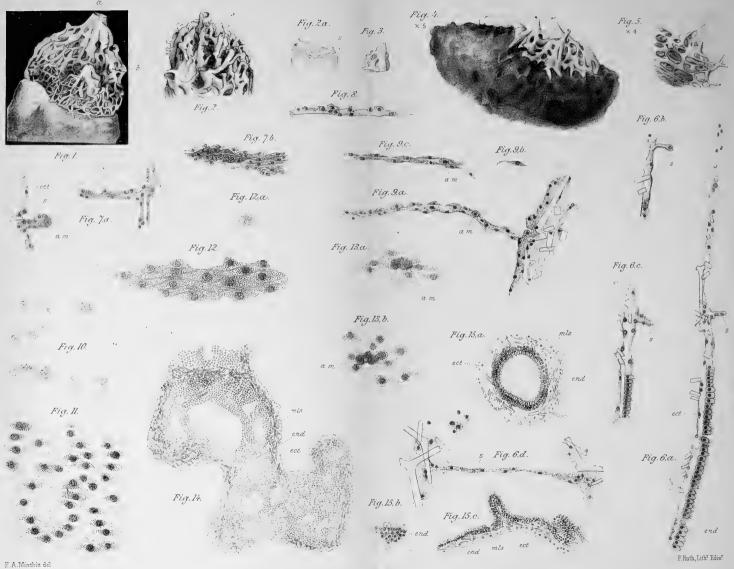




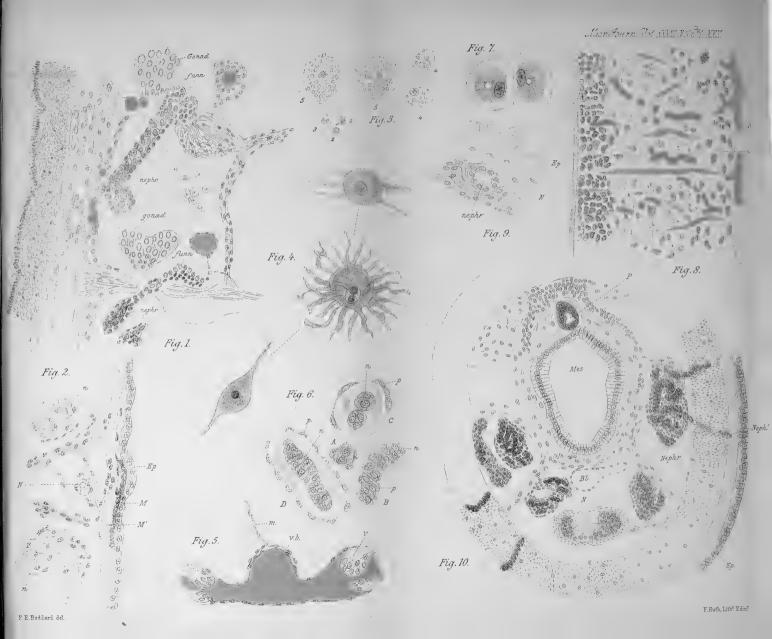




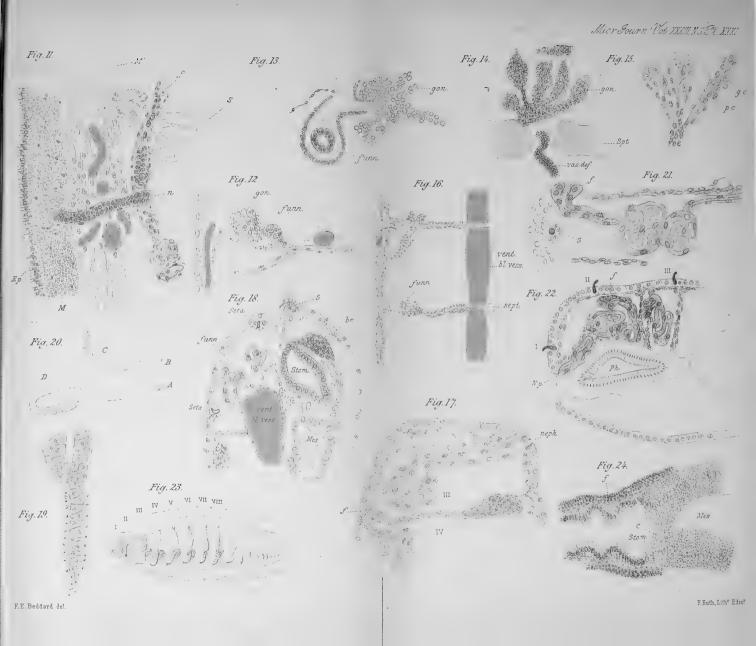








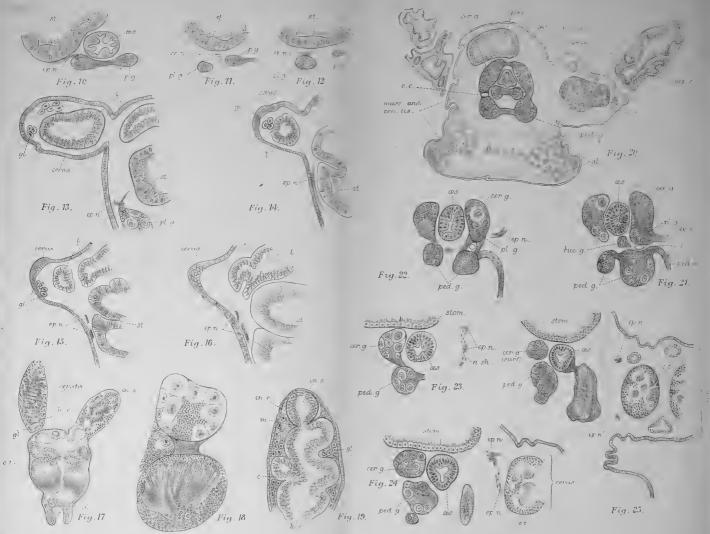










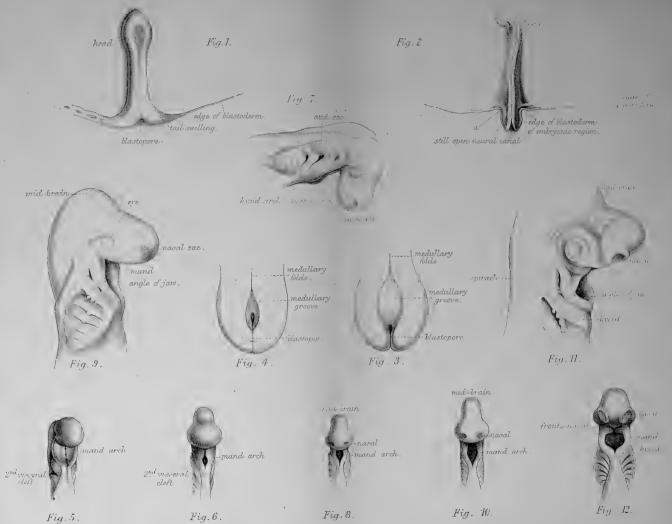








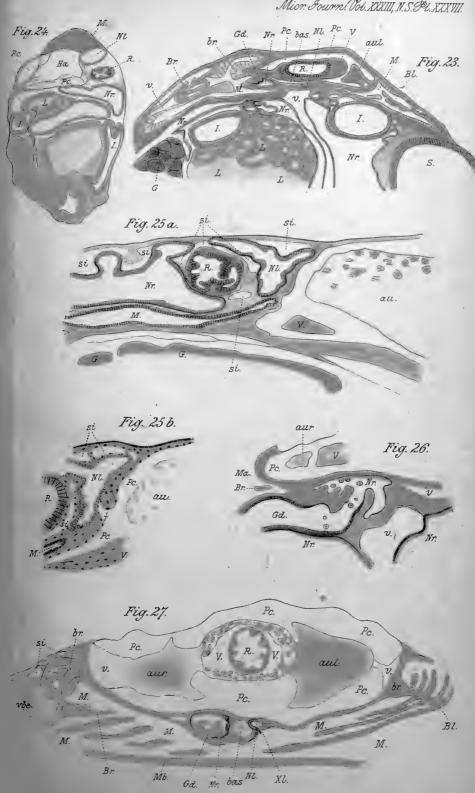
Mintern Bros, lith . London.

















3 2044 110 319 761

